LISTING OF CLAIMS

1. (Original) An isolated nucleic acid molecule encoding an SBP1 polypeptide, or functional fragment thereof, selected from the group consisting of:

(a) a nucleic acid molecule encoding a polypeptide

comprising amino acids 1-91 of SEQ ID NO:14, wherein said polypeptide binds Survivin;

(b) a nucleic acid molecule encoding a polypeptide

comprising amino acids 85-125 of SEQ ID NO:14, wherein said polypeptide enhances cyclin B1/cdc2 kinase activity;

(c) a nucleic acid molecule encoding SEQ ID NO:14; and

(d) a nucleic acid molecule that hybridizes to the

complement of the nucleic acid molecule of (a), (b) or (c) under highly stringent hybridization conditions, and encodes a polypeptide that binds Survivin or enhances cyclin B1/cdc2 kinase activity.

2. (Original) The isolated nucleic acid molecule of claim 1, wherein said polypeptide is encoded by a nucleotide sequence selected from the group consisting of:

(a) nucleotides 1-273 of SEQ ID NO:13;

(b) nucleotides 253-375 of SEQ ID NO:13; and

(c) SEQ ID NO:13

3. (Original) A vector comprising the nucleic acid molecule of claim 1.

4. (Original) A recombinant cell comprising the nucleic acid molecule of claim 1.

5. (Original) An oligonucleotide comprising at least 17 nucleotides capable of specifically hybridizing with a nucleotide sequence set forth in SEQ ID NO:13 or its complement.

6. (Original) The oligonucleotide of claim 5, wherein said oligonucleotide is labeled with a detectable label.

7. (Original) A kit for detecting the presence of an SPB1 nucleic acid molecule, comprising at least one oligonucleotide according to claim 5.

8. (Original) An isolated SBP1 polypeptide, or functional fragment thereof, encoding by the nucleic acid molecule of claim 1.

9. (Original) The SBP1 polypeptide of claim 8, wherein said polypeptide comprises the amino acid sequence set forth as amino acids 1-91 of SEQ ID NO:14.

10. (Original) The SBP1 polypeptide of claim 8, wherein said polypeptide comprises the amino acid sequence set forth as amino acids 85-125 of SEQ ID NO:14.

11. (Original) The SBP1 polypeptide of claim 8, wherein said polypeptide comprises the amino acid sequence set forth as SEQ ID NO:14.

12. (Original) A method for expression of an SBP1 polypeptide, said method comprising culturing the cell of claim 4 under conditions suitable for expression of said SBP1.

13. (Original) An isolated antibody having specific reactivity with an SBP1 polypeptide according to claim 11.

14. (Original) The antibody of claim 13, wherein said antibody is a monoclonal antibody.

15. (Original) A cell line producing the monoclonal antibody of claim 14.

16. (Original) The antibody of claim 13, wherein said antibody is a polyclonal antibody.

17. (Original) A transgenic non-human mammal expressing the nucleic acid molecule of claim 1.

18. (Original) A method for detecting a SBP nuleic acid molecule in a sample, comprising contacting a sample containing nucleic acids with one or more oligonucleotides according to claim 5, wherein said contacting is effected under high stringency hybridization conditions, and detecting a nucleic acid molecule that hybridizes to said oligonucleotide.

19. (Original) A method of detecting a SBP nucleic acid molecule in a sample, comprising contacting said sample with two or more SBP oligonucleotides according to claim 5, amplifying a nucleic acid molecule, and detecting said amplification.

20. (Original) A method for detecting the presence of SBP1 in a sample, comprising contacting a sample with an antibody according to claim 13, and detecting the presence of specific binding of said antibody to said sample, thereby detecting the presence of a SBP1 in said sample.

21. (Original) A method of identifying an effective agent that alters the association of SBP1 with a SBP1 associated polypeptide (SAP), comprising the steps of:

(a) contacting said SBP1 and said SAP polypeptide, under conditions that allow said SBP1 and SAP polypeptide to associate, with a compound; and

(b) detecting the altered association of said SBP1 and SAP polypeptide, thereby identifying a compound that is an effective agent for altering the association of said SBP1 with SAP.

22. (Original) A method of modulating apoptosis or cell division in a cell, comprising the steps of:

(a) introducing the nucleic acid molecule of claim 1 into the cell; and

(b) expressing said SBP1 polypeptide or

functional fragment in said cell, wherein the expression of said SBP1 polypeptide or functional fragment modulates apoptosis or cell division in said cell.

23. (Original) A method of modulating the level of apoptosis or cell division in a cell, comprising introducing an antisense nucleic acid molecule into the cell, wherein said antisense nucleic acid molecule specifically hybridizes to SEQ ID NO:13, wherein said hybridization reduces or inhibits the expression of SBP1 in said cell.

24. (Original) A therapeutic composition comprising a pharmaceutically acceptable carrier and a compound selected from the group consisting of a SBP polypeptide, a functional fragment of said SBP1, an SBP1 nucleic acid molecule, a SBP1 antisense nucleic acid molecule and an anti-SBP antibody.

25. (Original) A method of treating a pathology characterized by abnormal cell proliferation, comprising administering an effective amount of the composition according to claim 24.

26. (Original) A method of diagnosing a pathology characterized by an increased or decreased level of SBP1 in a subject, comprising the steps of:

(a) obtaining a test sample from the subject;

(b) contacting said sample with an agent that can bind

said SBP1 under suitable conditions, wherein said conditions allow specific binding of said agent to said

SBP1; and

(c) comparing the amount of said specific binding in

said test sample with the amount of specific binding in a control sample, wherein an increased or decreased amount of said specific binding in said test sample as compared to said control sample is diagnostic of a pathology.

27. (Original) The method of claim 26, wherein said agent is selected from the group consisting of anti-SBP1 antibody, a SBP1 associated polypeptide (SAP), and a SBP1 nucleic acid molecule.

28. (Original) A method of modulating the level of apoptosis or cell division in a cell, comprising contacting the cell with a compound that effectively alters the association of SBP1 with a SAP in the cell, or that effectively alters the activity of SBP1 in the cell.

29. (Original) A method of identifying a site on Survivin that interacts with SBP1, said method comprising constructing a plurality of Survivin mutants; contacting said Survivin mutants with SBP1 or a Survivin-binding fragment therefrom under conditions that permit SBP1 binding to a native Survivin; and selecting a Survivin mutant that does not bind to said SBP1 or Survivin-binding fragment therefrom, thereby identifying a site on Survivin that interacts with SBP1.

30. (Original) A method of identifying a site on Survivin that interacts with SBP1, said method comprising contacting Survivin with SBP1 or a Survivin-binding fragment

therefrom under conditions that permit SBP1 binding to native Survivin; and identifying a site on Survivin that interacts with SBP1 using a method selected from mass spectrometry, photoaffinity labeling, nuclear magnetic resonance (NMR), X-ray crystallography or virtual computational methodoloy.

31. (Original) The method of claim 30, wherein said virtual computational methodology is protein-protein docking prediction.

32. (Original) A method identifying a compound that binds to SBP1, comprising the steps of:

(a) contacting said SBP1 with a test compound, under conditions that allow said SBP1 and said compound to associate; and

(b) detecting a SBP1: compound complex, thereby identifying a compound that binds to said SBP1.

33. (Original) The method of claim 32, wherein said compound is identified using a method selected from a mass spectrometry, nuclear magnetic resonance (NMR), or virtual computational methodology.

34. (Original) A chimeric protein comprising a SBP1 domain selected from the group consisting of a Survivin-binding domain and a cyclin-dependent kinase regulatory domain.